

What is claimed is:

1. A mobile communication system including a radio network controller controlling a base station, wherein
the radio network controller comprises means for
5 transferring packet data from a handover source base station to a handover destination base station when handover between base stations occurs due to a move of a mobile station in the course of high-speed packet communicationn by an HSDPA (High Speed Downlink Packet Access) system between the base station
10 and the mobile station.
2. The mobile communication system according to claim 1, wherein the means for transferring packet data transfers data from the handover source base station to the handover destination base station by routing using an IP (Internet Protocol) address.
- 15 3. The mobile communication system according to claim 2, wherein the means for transferring packet data informs the handover source base station of an IP address and UDP (User Datagram Protocol) port number of the handover destination base station.
- 20 4. The mobile communication system according to claim 1, wherein the means for transferring packet data establishes an AAL2 [ATM (Asynchronous Transfer Mode) Adaptation Layer type 2] connection between the handover source base station and the handover destination base station thereby to transfer data from

the handover source base station to the handover destination base station.

5. The mobile communication system according to claim 4, wherein the means for transferring packet data informs the
5 handover source base station of an AAL2 endpoint address of the handover destination base station.

6. The mobile communication system according to claim 1, wherein a sequence number is added to an HS-DSCH (High Speed-Downlink Shared Channel) Frame Protocol so that the
10 handover destination base station controls an order of transferring downlink high-speed packet data when the handover between base stations occurs.

7. A radio network controller controlling a base station comprising:

15 means for transferring packet data from a handover source base station to a handover destination base station when handover between base stations occurs due to a move of a mobile station in the course of high-speed packet communication by an HSDPA (High Speed Downlink Packet Access) system between the base
20 station and the mobile station.

8. The radio network controller according to claim 7, wherein the means for transferring packet data transfers data from the handover source base station to the handover destination base station by routing using an IP (Internet Protocol) address.

9. The radio network controller according to claim 8, wherein the means for transferring packet data informs the handover source base station of an IP address and UDP (User Datagram Protocol) port number of the handover destination base station.

5 10. The radio network controller according to claim 7, wherein the means for transferring packet data establishes an AAL2 [ATM (Asynchronous Transfer Mode) Adaptation Layer type 2] connection between the handover source base station and the handover destination base station thereby to transfer data from the
10 handover source base station to the handover destination base station.

11. The radio network controller according to claim 10, wherein the means for transferring packet data informs the handover source base station of an AAL2 endpoint address of the handover
15 destination base station.

12. The radio network controller according to claim 7, wherein a sequence number is added to an HS-DSCH (High Speed-Downlink Shared Channel) Frame Protocol so that the handover destination base station controls an order of transferring downlink
20 high-speed packet data when the handover between base stations occurs.

13. A method of transferring data for a mobile communication system including a radio network controller controlling a base station, comprising:

5 a step of transferring packet data from a handover source base station to a handover destination base station when handover between base stations occurs due to a move of a mobile station in the course of high-speed packet communication by an HSDPA (High Speed Downlink Packet Access) system between the base station and the mobile station, the step being executed by the
10 radio network controller.

14. The method according to claim 13, wherein the step of transferring packet data includes transferring data from the handover source base station to the handover destination base station by routing using an IP (Internet Protocol) address.

15 15. The method according to claim 14, wherein the step of transferring packet data includes informing the handover source base station of an IP address and UDP (User Datagram Protocol) port number of the handover destination base station.

16. The method according to claim 13, wherein the step of
20 transferring packet data includes establishing an AAL2 [ATM (Asynchronous Transfer Mode) Adaptation Layer type 2] connection between the handover source base station and the handover destination base station thereby to transfer data from the handover source base station to the handover destination base
25 station.

17. The method according to claim 16, wherein the step of transferring packet data includes informing the handover source base station of an AAL2 endpoint address of the handover destination base station.

5 18. The method according to claim 13, wherein a sequence number is added to an HS-DSCH (High Speed-Downlink Shared Channel) Frame Protocol so that the handover destination base station controls an order of transferring downlink high-speed packet data when the handover between base stations occurs.

10 19. A program of a method of transferring data for a mobile communication system including a radio network controller controlling a base station, wherein the program causes a computer to execute a step of:

transferring packet data from a handover source base station
15 to a handover destination base station when handover between base stations occurs due to a move of a mobile station in the course of high-speed packet communication by an HSDPA (High Speed Downlink Packet Access) system between the base station and the mobile station.